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This article has accompanying videos that can be viewed on the Internet (July 18 issue of *JACC*) at: http://www.onlinejacc.org


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1649 Editorial Comment **Selection of Permanent Ventricular Pacing Site: How Far Should We Go?** *Hung-Fat Tse, Chu-Pak Lau*

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1652 **Effectiveness of Physical Counterpressure Maneuvers in Preventing Vasovagal Syncope: The Physical Counterpressure Manoeuvres Trial (PC-Trial)** *Nynke van Dijk, Fabio Quartieri, Jean-Jaques Blanc, Roberto Garcia-Civera, Michele Brignole, Angel Moya, Wouter Wieling, on behalf of the PC-Trial Investigators*

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1658 **Pre-Operative Computed Tomography Coronary Angiography to Detect Significant Coronary Artery Disease in Patients Referred for Cardiac Valve Surgery** *Willem B. Meijboom, Nico R. Mollet, Carlos A. G. Van Mieghem, Jolanda Kluin, Annick C. Weustink, Francesca Pugliese, Eleni Vourvouri, Filippo Cademartiri, Ad J. J. C. Bogers, Gabriel P. Krestin, Pim J. de Feyter*

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1666 **Acute Effects of High-Fat Meals Enriched With Walnuts or Olive Oil on Postprandial Endothelial Function** *Berenice Cortés, Isabel Núñez, Montserrat Cofán, Rosa Gilabert, Ana Pérez-Heras, Elena Casals, Ramón Deulofeu, Emilio Ros*

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1672 **Favorable Effects of Inhaled Treprostinil in Severe Pulmonary Hypertension: Results From Randomized Controlled Pilot Studies** *Robert Voswinckel, Beate Enke, Frank Reichenberger, Markus Kohstall, Andree Kreckel, Stefanie Krick, Henning Gall, Tobias Gessler, Thomas Schmehl, Hossein A. Ghofrani, Ralph Theo Schermuly, Friedrich Grimminger, Lewis J. Rubin, Werner Seeger, Horst Olschewski*

**CONGENITAL HEART DISEASE**

1682 **Presentation and Prognosis of Complete Atrioventricular Block in Childhood, According to Maternal Antibody Status** *Elisabeth Villain, Nathalie Coastedoat-Chalumeau, Eloi Marijon, Younes Boudjemline, Jean-Charles Piette, Damien Bonnet*

## PRECLINICAL STUDY

1688 **Attenuation by Metallothionein of Early Cardiac Cell Death via Suppression of Mitochondrial Oxidative Stress Results in a Prevention of Diabetic Cardiomyopathy** *Lu Cai, Yuehui Wang, Guihua Zhou, Teresa Chen, Ye Song, Xiaokun Li, Y. James Kang*

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1698 **The Year in Hypertension** *Bryan Williams*

## EXPEDITED REVIEWS

1712 **Autologous Bone Marrow Stem Cell Mobilization Induced by Granulocyte Colony-Stimulating Factor After Subacute ST-Segment Elevation Myocardial Infarction Undergoing Late Revascularization: Final Results From the G-CSF-STEMI (Granulocyte Colony-Stimulating Factor ST-Segment Elevation Myocardial Infarction) Trial** *Markus G. Engelmann, Hans D. Theiss, Christine Hennig-Theiss, Armin Huber, Bernd J. Wintersperger, Anja-Eva Werle-Ruedinger, Stefan O. Schoenberg, Gerhard Steinbeck, Wolfgang-M. Franz*

1722 Editorial Comment **Myocardial Regeneration by Stem Cells: Seeing the Unseeable** *James S. Forrester, Prediman K. Shah, Raj R. Makkar*

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1727 **Unprotected Left Main Disease: Stent or Surgery?** *Robert Francis Bonvini, Vitali Verin, Ulrich Sigwart*
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1742 **Impact of the Degree of Peri-Interventional Platelet Inhibition After Loading With Clopidogrel on Early Clinical Outcome of Elective Coronary Stent Placement** *Willibald Hochholzer, Dietmar Trenk, Hans-Peter Bestehorn, Benjamin Fischer, Christian M. Valina, Miroslaw Ferenc, Michael Gick, Angelika Caputo, Heinz Joachim Büttner, Franz-Josef Neumann*

1751 Editorial Comment **Platelet Function Assessment to Predict Outcomes After Coronary Interventions: Hype or Hope?** *Fernando Alfonso, Dominick J. Angiolillo*

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1763 Editorial Comment **Chasing Troponin: How Low Can You Go if You Can See the Rise?** *Allan S. Jaffe*

1765 **Isolated Elevation in Troponin T After Percutaneous Coronary Intervention Is Associated With Higher Long-Term Mortality** *Abhiram Prasad, Mandeep Singh, Amir Lerman, Ryan J. Lennon, David R. Holmes, Jr, Charanjit S. Rihal*

1771 Editorial Comment **Measuring Troponin Elevation After Percutaneous Coronary Intervention: Ready for Prime Time?** *Neal S. Kleiman*

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1782 **Efficacy and Safety of Torcetrapib, a Novel Cholesteryl Ester Transfer Protein Inhibitor, in Individuals With Below-Average High-Density Lipoprotein Cholesterol Levels on a Background of Atorvastatin** *James M. McKenney, Michael H. Davidson, Charles L. Shear, James H. Revkin*

1791 Editorial Comment **Cholesteryl Ester Transfer Protein Inhibition: The Next Frontier in Combating Coronary Artery Disease?** *Richard V. Milani, Carl J. Lavie*

1793 **Effects of High-Dose Atorvastatin on Cerebrovascular Events in Patients With Stable Coronary Disease in the TNT (Treating to New Targets) Study** *David D. Waters, John C. LaRosa, Philip Barter, Jean-Charles Fruchart, Antonio M. Gotto, Jr, Roddy Carter, Andrei Breazna, John J. P. Kastelein, Scott M. Grundy*

### METABOLIC SYNDROME

1800 **Metabolic Syndrome and Early-Onset Coronary Artery Disease: Is the Whole Greater Than Its Parts?** *Carlos Iribarren, Alan S. Go, Gail Husson, Stephen Sidney, Joan M. Fair, Thomas Quertermous, Mark A. Hlatky, Stephen P. Fortmann*

### HEART FAILURE

1808 **Gender-Specific Risk Stratification With B-Type Natriuretic Peptide Levels in Patients With Acute Dyspnea: Insights From the B-type Natriuretic Peptide for Acute Shortness of Breath Evaluation Study** *Michael Christ, Kirsten Laule-Kilian, Willibald Hochholzer, Theresia Klima, Tobias Breidthardt, Andre P. Perruchoud, Christian Mueller*

### HEART RHYTHM DISORDERS

1813 **Ablation of Left Ventricular Epicardial Outflow Tract Tachycardia From the Distal Great Cardiac Vein** *Owen A. Obel, Andre d'Avila, Petr Neuzil, Eduardo B. Saad, Jeremy N. Ruskin, Vivek Y. Reddy*

### CARDIAC IMAGING

1818 **In Vivo $^{18}$F-Fluorodeoxyglucose Positron Emission Tomography Imaging Provides a Noninvasive Measure of Carotid Plaque Inflammation in Patients** *Ahmed Tawakol, Raymond Q. Migrino, Gregory G. Bashian, Shahinaz Bedri, David Vermylen, Ricardo C. Cury, Denise Yates, Glenn M. LaMuraglia, Karen Furie, Stuart Houser, Henry Gewirtz, James E. Muller, Thomas J. Brady, Alan J. Fischman*

1825 **Simvastatin Attenuates Plaque Inflammation: Evaluation by Fluorodeoxyglucose Positron Emission Tomography** *Nobuhiro Tahara, Hisashi Kai, Masatoshi Ishibashi, Hiroyuki Nakaura, Hayato Kaida, Kenkichi Baba, Naofumi Hayabuchi, Tsutomu Imaizumi*

1832 **Non-Invasive Visualization of the Cardiac Venous System in Coronary Artery Disease Patients Using 64-Slice Computed Tomography** *Nico R. Van de Veire, Joanne D. Schuijf, Johan De Sutter, Dan Devos, Gabe B. Bleeker, Albert de Roos, Ernst E. van der Wall, Martin J. Schalij, Jeroen J. Bax*

1839 **Magnetically Targeted Endothelial Cell Localization in Stented Vessels** *Sorin V. Pislaru, Adriana Harbuzariu, Rajiv Gulati, Tyra Witt, Nicole P. Sandhu, Robert D. Simari, Gurpreet S. Sandhu*

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1846 **Non-Invasive Assessment of Endothelial Function: Which Technique?** *Ann E. Donald, Marietta Charakida, Tim J. Cole, Peter Friberg, Phil J. Chowienczyk, Sandrine C. Millasseau, John E. Deanfield, Julian P. Halcox*

### RENAL ARTERY STENOSIS

1851 **Assessment of Renal Artery Stenosis Severity by Pressure Gradient Measurements** *Bernard De Bruyne, Ganesh Manoharan, Nico H. J. Pijls, Katia Verhamme, Juraj Madaric, Jozef Bartunek, Marc Vanderheyden, Guy R. Heyndrickx*

1856 Editorial Comment **Physiologic Assessment of Renal Artery Stenosis: Will History Repeat Itself?** *William F. Fearon*

### PEDIATRIC CARDIOLOGY

1859 **Adverse Effects of Dopamine on Systemic Hemodynamic Status and Oxygen Transport in Neonates After the Norwood Procedure** *Jia Li, Gencheng Zhang, Helen Holtby, Tilman Humpl, Christopher A. Caldarone, Glen S. Van Arsdell, Andrew N. Redington*

1865 **Improvement of Early Vascular Changes and Cardiovascular Risk Factors in Obese Children After a Six-Month Exercise Program** *Andreas A. Meyer, Günther Kundt, Ute Lenschow, Peter Schuff-Werner, Wolfgang Kienast*

## PRECLINICAL STUDY

1871 **A Novel Inhibitory Effect of Naloxone on Macrophage Activation and Atherosclerosis Formation in Mice** *Shu-Lin Liu, Yi-Heng Li, Guey-Yueh Shi, Yung-Huan Chen, Chia-Wei Huang, Jau-Shyong Hong, Hua-Lin Wu*

## MEETING HIGHLIGHTS

1880 **Meeting Highlights of the 17th Annual Scientific Sessions of the American Society of Echocardiography: Baltimore, Maryland, June 3–7, 2006** *William A. Zoghbi, Roberto M. Lang, Mani A. Vannan, Neil J. Weissman, Marti McCulloch, Wyman W. Lai, Mary C. Corretti, Sherif F. Nagueh, Bijo vconaJames M. McKenney, Michael H. Davidson, Charles L. Shear, James H. Revkin*

## YEAR IN CARDIOLOGY SERIES

1886 **The Year in Epidemiology, Health Services Research, and Outcomes Research** *Harlan M. Krumholz, Frederick A. Masoudi*

## EXPEDITED REVIEW

1896 **Diagnostic Performance of Multislice Spiral Computed Tomography of Coronary Arteries as Compared With Conventional Invasive Coronary Angiography: A Meta-Analysis** *Michèle Hamon, Giuseppe G. L. Biondi-Zoccai, Patrizia Malagutti, Pierfrancesco Agostoni, Rémy Morello, Marco Valgimigli, Martial Hamon*

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1911 **President's Page: GAP-D2B: An Alliance for Quality** *Steven E. Nissen, John E. Brush, Harlan M. Krumholz*

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### LETTERS TO THE EDITOR

1913 **Spontaneous Late Closure of Patent Foramen Ovale** *Richard W. Harper, Haris M. Haqqani*

1913 **Patent Foramen Ovale and the Risk of Cryptogenic Stroke** *Ryan G. Schrale, Andrew R. J. Mitchell, Oliver J. Ormerod*
**REPLY** *Bernhard Meier*
**REPLY** *Irene Meissner*

1914 **Coronary Plaque Burden and Cardiovascular Risk Factors: Single-Point Versus Serial Assessment** *Clemens von Birgelen, Marc Hartmann*
**REPLY** *Stephen J. Nicholls, E. Murat Tuzcu, Steven E. Nissen*

1916 **Most Asymptomatic Diabetic Patients Will Not Benefit From Coronary Revascularization** *David Rott, David Leibowitz*
**REPLY** *Roldano Scognamiglio*

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## CARDIOSOURCE SPOTLIGHT

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**A15** **Reversal of Calcium Cycling Defects in Advanced Heart Failure: Toward Molecular Therapy** *Masahiko Hoshijima, Ralph Knöll, Mohammad Pashmforoush, Kenneth R. Chien*

**A24** **Peroxisome Proliferator-Activated Receptors at the Crossroads of Obesity, Diabetes, and Cardiovascular Disease** *Masahiko Hoshijima, Ralph Knöll, Mohammad Pashmforoush, Kenneth R. Chien*

**A24** **Peroxisome Proliferator-Activated Receptors at the Crossroads of Obesity, Diabetes, and Cardiovascular Disease** *Andries J. Gilde, Jean-Charles Fruchart, Bart Staels*

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**1919** State-of-the-Art Paper **Computed Tomography Coronary Angiography** *Stephan Achenbach*

**1929** **Non-Invasive Detection of Coronary Artery Disease in Patients With Left Bundle Branch Block Using 64-Slice Computed Tomography** *Saïd Ghostine, Christophe Caussin, Béatrice Daoud, Michel Habis, Eric Perrier, David Pesenti-Rossi, Anne Sigal-Cinqualbre, Claude-Yves Angel, Bernard Lancelin, André Capderou, Jean-François Paul*

**1935** Editorial Comment **Detecting Coronary Artery Disease in Left Bundle Branch Block** *Ami E. Iskandrian*

**1938** **In Vivo Analysis of the Anatomical Relationship of Coronary Sinus to Mitral Annulus and Left Circumflex Coronary Artery Using Cardiac Multidetector Computed Tomography: Implications for Percutaneous Coronary Sinus Mitral Annuloplasty** *Arti J. Choure, Mario J. Garcia, Barbara Hesse, Matthew Sevensma, George Maly, Neil L. Greenberg, Lynn Borzi, Stephen Ellis, E. Murat Tuzcu, Samir R. Kapadia*

**1946** **Detection of Coronary Artery Stenosis With Whole-Heart Coronary Magnetic Resonance Angiography** *Hajime Sakuma, Yasutaka Ichikawa, Shuji Chino, Tadanori Hirano, Katsutoshi Makino, Kan Takeda*

**1951** Editorial Comment **Coronary MRI: More Pretty Pictures or Present-Day Value?** *Thomas H. Hauser, Warren J. Manning*


### DELAYED ENHANCEMENT MAGNETIC RESONANCE


**1953** **Delayed Enhancement Magnetic Resonance Imaging Predicts Response to Cardiac Resynchronization Therapy in Patients With Intraventricular Dyssynchrony** *James A. White, Raymond Yee, Xiaping Yuan, Andrew Krahn, Allan Skanes, Michele Parker, George Klein, Maria Drangova*

**1961** **Discrimination of Myocardial Acute and Chronic (Scar) Infarctions on Delayed Contrast Enhanced Magnetic Resonance Imaging With Intravascular Magnetic Resonance Contrast Media** *Maythem Saeed, Oliver Weber, Randall Lee, Loi Do, Alastair Martin, David Saloner, Philip Ursell, Philippe Robert, Claire Corot, Charles B. Higgins*

**1969** **Contrast-Enhanced Cardiovascular Magnetic Resonance Imaging of Right Ventricular Infarction** *Andreas Kumar, Hassan Abdel-Aty, Ilka Kriedemann, Jeanette Schulz-Menger, C. Michael Gross, Rainer Dietz, Matthias G. Friedrich*

**1977** **Cardiovascular Magnetic Resonance, Fibrosis, and Prognosis in Dilated Cardiomyopathy** *Ravi G. Assomull, Sanjay K. Prasad, Jonathan Lyne, Gillian Smith, Elizabeth D. Burman, Mohammed Khan,*

*Mary N. Sheppard, Philip A. Poole-Wilson, Dudley J. Pennell*

1986 Editorial Comment **The Expanding Prognostic Role of Late Gadolinium Enhanced Cardiac Magnetic Resonance** *Christopher M. Kramer*

**LEFT VENTRICULAR FUNCTION**

1988 State-of-the-Art Paper **Left Ventricular Structure and Function: Basic Science for Cardiac Imaging** *Partho P. Sengupta, Josef Korinek, Marek Belohlavek, Jagat Narula, Mani A. Vannan, Arshad Jahangir, Bijoy K. Khandheria*

This article has accompanying videos that can be viewed on the Internet (November 21 issue of *JACC*) at: http://www.onlinejacc.org

2002 State-of-the-Art Paper **Myocardial Strain and Torsion Quantified by Cardiovascular Magnetic Resonance Tissue Tagging: Studies in Normal and Impaired Left Ventricular Function** *Marco J. W. Götte, Tjeerd Germans, Iris K. Rüssel, Jaco J. M. Zwanenburg, J. Tim Marcus, Albert C. van Rossum, Dirk J. van Veldhuisen*

2012 State-of-the-Art Paper **Assessment of Left Ventricular Function by Cardiac Ultrasound** *James D. Thomas, Zoran B. Popović*

2026 **Differentiation of Subendocardial and Transmural Infarction Using Two-Dimensional Strain Rate Imaging to Assess Short-Axis and Long-Axis Myocardial Function** *Jonathan Chan, Lizelle Hanekom, Chiew Wong, Rodel Leano, Goo-Yeong Cho, Thomas H. Marwick*

2034 **Evaluation of Global and Regional Left Ventricular Function With 16-Slice Computed Tomography, Biplane Cineventriculography, and Two-Dimensional Transthoracic Echocardiography: Comparison With Magnetic Resonance Imaging** *Marc Dewey, Mira Müller, Stephan Eddicks, Dirk Schnapauff, Florian Teige, Wolfgang Rutsch, Adrian C. Borges, Bernd Hamm*

This article has accompanying videos that can be viewed on the Internet (November 21 issue of *JACC*) at: http://www.onlinejacc.org

2045 **Single-Beat Noninvasive Imaging of Cardiac Electrophysiology of Ventricular Pre-Excitation** *Thomas Berger, Gerald Fischer, Bernhard Pfeifer, Robert Modre, Friedrich Hanser, Thomas Trieb, Franz X. Roithinger, Markus Stuehlinger, Otmar Pachinger, Bernhard Tilg, Florian Hintringer*

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2053 State-of-the-Art Paper **Three-Dimensional Echocardiography: The Benefits of the Additional Dimension** *Roberto M. Lang, Victor Mor-Avi, Lissa Sugeng, Petra S. Nieman, David J. Sahn*

2070 **Transesophageal Real-Time Three-Dimensional Echocardiography: Methods and Initial In Vitro and Human In Vivo Studies** *Michael Handke, Gudrun Heinrichs, Urs Moser, Felix Hirt, Felix Margadant, Felix Gattiker, Christoph Bode, Annette Geibel*

This article has accompanying videos that can be viewed on the Internet (November 21 issue of *JACC*) at: http://www.onlinejacc.org

**MULTIMODALITY IMAGING IN CLINICAL STUDIES**

2077 State-of-the-Art Paper **Cardiovascular Imaging in the Management of Atrial Fibrillation** *Oussama M. Wazni, Hsuan-Ming Tsao, Shih-Ann Chen, Hsuan-Hung Chuang, Walid Saliba, Andrea Natale, Allan L. Klein*

2085 State-of-the-Art Paper **Noninvasive Imaging in Myocarditis** *Hadi N. Skouri, G. William Dec, Matthias G. Friedrich, Leslie T. Cooper*

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2094 State-of-the-Art Paper **Imaging Stem Cells Implanted in Infarcted Myocardium** *Rong Zhou, Paul D. Acton, Victor A. Ferrari*

2107 **Noninvasive Characterization of Myocardial Molecular Interventions by Integrated Positron Emission Tomography and Computed Tomography** *Bettina Wagner, Martina Anton, Stephan G. Nekolla, Sybille Reder, Julia Henke, Stefan Seidl, Renate Hegenloh, Masao Miyagawa, Roland Haubner, Markus Schwaiger, Frank M. Bengel*

2116 **Multimodality Noninvasive Imaging Demonstrates In Vivo Cardiac Regeneration After Mesenchymal Stem Cell Therapy** *Luciano C. Amado, Karl H. Schuleri, Anastasios P. Saliaris, Andrew J. Boyle, Robert Helm, Behzad Oskouei, Marco Centola, Virginia Eneboe, Randell Young, Joao A. C. Lima, Albert C. Lardo, Alan W. Heldman, Joshua M. Hare*

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2125 **Relationship Between Coronary Artery Calcification Detected by Electron-Beam Computed Tomography and Abnormal Stress Echocardiography: Association and Prognostic Implications** *Gautam Ramakrishna, Jerome F. Breen, Sharon L. Mulvagh, Robert B. McCully, Patricia A. Pellikka*

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2168 **Myocardial Contrast Echocardiography Evolving as a Clinically Feasible Technique for Accurate, Rapid, and Safe Assessment of Myocardial Perfusion: The Evidence So Far** *Pieter A. Dijkmans, Roxy Senior, Harald Becher, Thomas R. Porter, Kevin Wei, Cees A. Visser, Otto Kamp*

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2186 **Effect of Clopidogrel With and Without Eptifibatide on Tumor Necrosis Factor-Alpha and C-Reactive Protein Release After Elective Stenting: Results From the CLEAR PLATELETS 1b Study** *Paul A. Gurbel, Kevin P. Bliden, Udaya S. Tantry*

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2209 **Beta-Blockers and Depression After Myocardial Infarction: A Multicenter Prospective Study** *Joost P. van Melle, Daniëlle E. P. Verbeek, Maarten P. van den Berg, Johan Ormel, Marcel R. van der Linde, Peter de Jonge*

2215 Editorial Comment **Depression After Myocardial Infarction: Unraveling the Mystery of Poor Cardiovascular Prognosis and Role of Beta-Blocker Therapy** *Roland von Känel, Stefan Begré*

2218 **Course of Depressive Symptoms and Medication Adherence After Acute Coronary Syndromes: An Electronic Medication Monitoring Study** *Nina Rieckmann, William Gerin, Ian M. Kronish, Matthew M. Burg, William F. Chaplin, Grace Kong, François Lespérance, Karina W. Davidson*

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2232 Editorial Comment **Time to Address the Cardiac Metabolic "Triple Whammy": Ischemic Heart Failure in Diabetic Patients** *John D. Horowitz, Jennifer A. Kennedy*

2235 **The Relative Strength of C-Reactive Protein and Lipid Levels as Determinants of Ischemic Stroke Compared With Coronary Heart Disease in Women** *Brendan M. Everett, Tobias Kurth, Julie E. Buring, Paul M. Ridker*

### HEART FAILURE TREATMENT

2243 **Cardiac Resynchronization Therapy in Patients With a Narrow QRS Complex** *Gabe B. Bleeker, Eduard R. Holman, Paul Steendijk, Eric Boersma, Ernst E. van der Wall, Martin J. Schalij, Jeroen J. Bax*

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